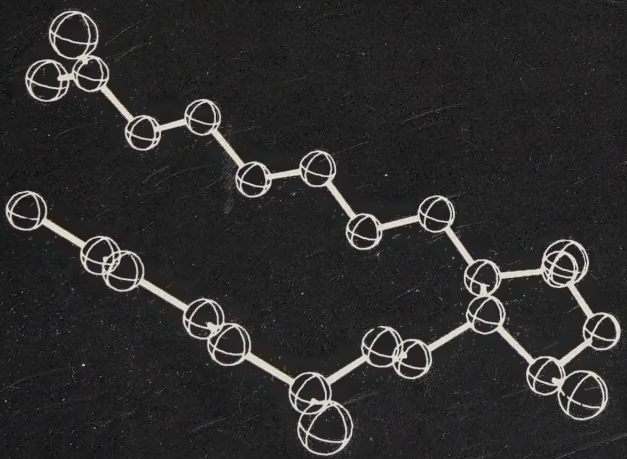
ISSN 0090-6980

Vol. 21 1981
January - June

PROSTAGLANDINS



GERON-X

PROSTAGLANDINS

January 1981 Volume 21, Number 1

Assay of Prostacyclin Synthesis in Intact Aorta by Aqueous Sampling
R.V. Panganamala, A.C. Gillespie and A.J. Merola 1

Prostaglandin Production by Human Blood Monocytes and Mouse Peritoneal Macrophages: Synthesis Dependent on In Vitro Culture Conditions
R.S. Bockman 9

Argentation Thin Layer Chromatography of Arachidonic Acid Metabolites Isolated From Human Platelets
J.E. Greenwald, M.S. Alexander, M. Van Rollins, L.K. Wong and J.R. Bianchine . . . . . , 33

Extractive Alkylation of Prostaglandins
J. Rosenfeld, T.L. Ting and A. Phatak 41

Decreased Sensitivity of Human Platelets to PGI_2 During Long-Term Intraarterial Prostacyclin Infusion in Patients with Peripheral Vascular Disease - A Rebound Phenomenon?
H. Sinzinger, K. Silberbauer, A.K. Horsch and A. Gall 49

Gestational Changes in the Progesterone and Prostaglandin F Levels of the Guinea Pig
A.I. Csapo, J. Eskola and S. Tarro 53

Stimulation of Rat Colonic Mucosal Prostaglandin Synthesis by Calcium and Carbamylcholine: Relationship to Alterations in Cyclic Nucleotide Metabolism
P.A. Craven and F.R. DeRubertis 65

Increased Prostacyclin Synthesizing Activity in Human Ripening Uterine Cervix
M. Tanaka, I. Morita, S. Hirakawa and S. Murota 83

The Influence of Prostaglandins on Sperm Motility
W. Schlegel, S. Rotermund, G. Färber and E. Nieschlag 87

High Performance Liquid Chromatography and UV Detection for the Separation and Quantitation of Prostaglandins
A. Terragno, R. Rydzik and N. A. Terragno 101

Prostacyclin and Blood Glucose Levels in Humans and Rabbits
A. Dembińska-Kiec, E. Kostka-Trabka, L. Grodzińska, A. Żmuda, K. Bieroń, A. Kędzior, W. Ochmański and T. Żelazny 113

The Production of 5-HETE and Leukotriene B in Rat Neutrophils from Carrageenan Pleural Exudates
M.I. Siegel, R.T. McConnell, R.W. Bonser and P. Cuatrecasas 123

The Impermeability of the Basic Cell Membrane to Thromboxane-B_2, Prostacyclin and 6-Keto-$PGF_{1\alpha}$
R.A. Baroody and L.Z. Bito 133

Isomers of Leukotriene B_4 Possess Different Biological Potencies
A.W. Ford-Hutchinson, M.A. Bray, F.M. Cunningham, E.M. Davidson and M.J.H. Smith 143

Correction: Prostaglandin E_1 and E_2 in Bovine Semen
J. Mai and J.E. Kinsella - Vol. 20:2, 187-197 153

PROSTAGLANDINS

February 1981 Volume 21, Number 2

Stability of Prostaglandin I_2 in Human Blood
D. D. Pifer, L.M. Cagen and C. McI. Chesney 165

Luteolysis in the Hamster: Abrogation by Gonadotropin and Prolactin Pretreatment
K.H. Harris and B.D. Murphy 177

Effect of PGD_2, PGE_2, $PGF_{2\alpha}$ and PGI_2 on Blood Pressure, Heart Rate and Plasma Catecholamine Responses to a Spinal Cord Stimulation in the Rat
G. Feuerstein and I.J. Kopin 189

Prostaglandins for the Management of Anencephalic Pregnancy
M. Thiery, W. Parewijck and J.M. Decoster 207

Studies on Prostaglandin $F_{2\alpha}$ Formation Caused by Pentametylenetetrazol-Induced Convulsions in Rat Brain
A. Seregi, G. Folly, M. Antal, P. Serfozo and A. Schaefer 217

Preparation of Biological Fluids for Simultaneous Analysis of Prostaglandin Cyclo-Oxygenase Synthesized Compounds by Gas Chromatography with Electron Capture Detection
C.W. Leffler, D.M. Desiderio and C.E. Wakelyn 227

Inhibition of Platelet Thromboxane Synthetase by L-1-Tosylamido-2-Phenylethyl Chloromethyl Ketone
D.M. Yahn and M.B. Feinstein 243

Actinomycin Inhibits Gastric Mucosal Protection by Prostacyclin in Rats
G.A. Balint and V. Varro 255

Mechanism of Action of an Orally Active PGE_1-Analogue in Pregnant Guinea-Pigs
W. Elger, J. Eskola and A.I. Csapo 259

6-Keto-PGE_1 Exhibits More Potent Bronchodilatory Activity in the Cat Than Its Precursor, PGI_2
E.W. Spannhake, J.L. Levin, A.L. Hyman and P.J. Kadowitz 267

PGH_2, TxA_2 and PGI_2 Have Potent and Differentiated Actions on Human Uterine Contractility
L. Wilhelmsson, M. Wikland and N. Wiqvist 277

Biological Activities of a Chemically Synthesized Form of Leukotriene E_4
A.F. Welton, H.J. Crowley, D.A. Miller and B. Yaremko 287

Frogs Produce a Physiologically Active Compound from Eicosapentaenoic Acid
C.A. Herman, D.V. Gonzales, K. Doolittle and L. Jackson 297

Metabolism of Prostacyclin in Cynomolgus Monkey
F.F. Sun and B.M. Taylor 307

The Effect of Leukotrienes C_4 and D_4 on the Microvasculature of Guinea-Pig Skin
M.J. Peck, P.J. Piper and T.J. Williams 315

PROSTAGLANDINS

March 1981 Volume 21, Number 3

The Effect of Prostaglandins A_2, E_1, E_2, 15 Methyl E_2, 16, 16 Dimethyl E_2 and $F_{2\alpha}$ on Erythropoiesis
J.A. Arce, B.A. Naughton, G.A. Kolks, P. Liu, A.S. Gordon and S.J. Piliero 367

Prostacyclin Does Not Affect Insulin Secretion in Humans
C. Patrono, F. Pugliese, G. Ciabattoni, S.DiBlasi, A. Pierucci, G.A. Cinotti, A. Maseri and S. Chierchia 379

Mechanism of Protection Against Arachidonate Induced Sudden Death by Glucocorticoid
H. Araki, R.C. Peck, A.M. Lefer and J.B. Smith 387

The Effect of Imidazole and Imidazole-Analogues on Bone Resorption In Vitro: A Suggested Role for Thromboxane A_2
J.N.M. Heersche and D.H. Jez 401

The Inactivation of Prostaglandin E_2 is Decreased by Dipyridamole and Sulfinpyrazone in Isolated Rat Lungs
P. Uotila and J. Männistö 413

Prostaglandin Synthesis Inhibitors in Ulcerative Colitis: Flurbiprofen Compared With Conventional Treatment
D.S. Rampton and G.D. Sladen 417

Distribution of Prostaglandin E_2-Sensitive Adenylate Cyclase Along the Rat Nephron
S.Torikai and K. Kurokawa 427

Prostaglandin Formation in Bacteria: A Reevaluation
E. Gulbis, N. Galand, J.E. Dumont and E. Schell-Frederick 439

Carbocyclic Thromboxane A_2: Aggrevation of Myocardial Ischemia by a New Synthetic Thromboxane A_2 Analog
E.F. Smith III, A.M. Lefer, D.Aharony, J.B. Smith, R.L. Magolda, D. Claremon and K. C. Nicolaou 443

Bronchodilator Activity of a PGE_2 Analog in Animals and in Man
J.E. Birnbaum, N.C. Birkhead and A.L. Oronsky. 457
F. Dessy, J.P. Rihoux and L. VanHumbeeck

Thromboxane A_2 is the Major Arachidonic Acid Metabolite of Human Cortical Hydronephrotic Tissue
A.R. Morrison, F. Thornton, A. Blumberg and E.D. Vaughan 471

The Ability of Vascular Tissue to Produce Prostacyclin Decreases with Age
R.S. Kent, B.B. Kitchell, D.G. Shand and A.R. Whorton 483

Respiratory Movements Alter the Generation of Prostacyclin and Thromboxane A_2 in Isolated Rat Lungs: The Influence of Arachidonic Acid-Pathway Inhibitors on the Ratio Between Pulmonary Prostacyclin and Thromboxane A_2
R. Korbut, J. Boyd and T. Eling 491

Effect of Gestational Age on Pulmonary Metabolism of Prostaglandin E_1 & E_2
R.I. Clyman, F. Mauray, M.A. Heymann and C. Roman 505

PROSTAGLANDINS

April 1981 Volume 21, Number 4

Relative Contracting and Relaxing Potencies of a Series of Prostaglandins on Isolated Canine Mesenteric Artery Strips
Y. Hatano, J.D. Kohli, L.I. Goldberg and J. Fried 515

Metabolism of Prostaglandin Endoperoxide by Microsomes from Cat Lung
H.S. She, D.B. McNamara, E.W. Spannhake, A.L. Hyman and P.J. Kadowitz 531

Inhibition of Platelet Aggregation by 1-Alkylimidazole Derivatives, Thromboxane A Synthetase Inhibitors
N. Kayama, K. Sakaguchi, S. Kaneko, T. Kubota, T. Fukuzawa, S. Kawamura, T. Yoshimoto and S. Yamamoto 543

Prostacyclin (PGI_2) Mediates Hypoxic Relaxation of Bovine Coronary Arterial Strips
A.M. Roberts, E.J. Messina and G. Kaley 555

Effects of Extracellular Ca^{2+} and the Intracellular Ca^{2+} Antagonist 8-(N, N-diethylamino) Octyl-3,4,5-trimethoxybenzoate on Rabbit Platelet Conversion of Arachidonic Acid into Thromboxane
J.O. Shaw 571

Prostaglandin E_1 Effects on Resting and Cholinergically Stimulated Lower Esophageal Sphincter Pressure in Cats
D. R. Sinar, J.R. Fletcher and D.O. Castell 581

Dissociation Between Renal Medullary PGE_2-Synthesis and Urine PGE_2-Excretion. Antagonism by Bumetanide of Chlorazanil Induced Urine PGE_2-Excretion in Rats
U.B. Olsen 591

Stimulatory Effect of Prostaglandin E_1 on Thyroliberin-induced α-melanotropin Release from Perifused Neuro-intermediate Lobes of Frog Pituitary Gland
P. Leroux, M.C. Tonon, S. Jégou, C. Delarue, F. Leboulenger, P. Netchitailo and H. Vaudry 599

Metabolism of (5E)-6a-carbaprostaglandin I_2 by Rhesus Monkey Lung 15-OH Prostaglandin Dehydrogenase
J. C. McGuire, D. R. Morton, F. C. Brokaw and F. F. Sun 609

A Route to Tritium Labelled 11-methyl Prostaglandins
R.R. Muccino, J. Cupano and A.A. Liebman 615

Influence of Electrically Induced Tachyarrhythmia on the Release of Cyclic AMP and PGE in Canine Coronary Sinus Blood and on the Level of Cyclic AMP in Myocardial Tissue
H.J. Mest, E.G. Krause, Ch. Taube and W. Förster 623

Species Difference in Increased Vascular Permeability by Synthetic Leukotriene C_4 and D_4
A. Ueno, K. Tanaka, M. Katori, M. Hayashi and Y. Arai 637

Suppression by Dexamethasone of Vascular Permeability Responses Induced with Leukotrienes C and D in the Rat Skin
K. Sugio, K. Ohuchi, M. Sugata and S. Tsurufuji 649

Prostacyclin Production in Rabbit Arteries in Situ: Inhibition by Arachidonic Acid-induced Endothelial Cell Damage or by Low-dose Aspirin
C. Ingerman-Wojenski, M.J. Silver, J.B. Smith, M. Nissenbaum and A. W. Sedar 655

5-Methoxy-2-methyl-3-indole Acetic Acid, a Metabolite and Alkali Hydrolysis Product of Indomethacin, Inhibits Platelet Aggregation, in vivo
W.I. Rosenblum, F. El-Sabban and G.H. Nelson 667

PROSTAGLANDINS

May 1981 Volume 21, Number 5

Metabolism of Exogenous Arachidonic Acid by Murine Macrophage-Like Tumor Cell Lines
W.F. Stenson, M.W. Nickells and J.P. Atkinson 675

A New Prostaglandin, C22-$PGF_{4\alpha}$, Synthesized from Docosahexaenoic Acid (C22:6n3) by Trout Gill
J. Mai, S.K. Goswami, G. Bruckner and J.E. Kinsella 691

Acute Protection Against Arachidonate Toxicity by Hydrocortisone and Dexamethasone in Mice
F. Rabbani, A. Myers, E. Ramey, P. Ramwell and J. Penhos 699

Hypoventilation and Elevation of End-expiratory Pressure Release a Substance Which Relaxes Isolated Arteries and Disaggregates Platelets in the Presence of Cyclooxygenase Inhibitors
K. Herbaczynska-Cedro, P. Truskolaski, A. Huszczuk and G.J. Dusting . . . 707

An NADP-linked Prostacyclin Dehydrogenase in Rabbit Kidney
J.M. Korff and J. Jarabak 719

Fish Oil Feeding Lowers Thromboxane- and Prostacyclin Production by Rat Platelets and Aorta and Does Not Result in the Formation of Prostaglandin I_3
G. Hornstra, E. Christ-Hazelhof, E. Haddeman, F.tenHoor, D.H. Nugteren . 727

Lack of Prostacyclin Biosynthesis by Aortic Tissue of the Chicken
M. Claeys, E. Wechsung, A.G. Herman and D.H. Nugteren 739

Stimulation of Prostaglandin E Production by Concanavalin A in Isolated Graafian Follicles
B. Strulovici, Y. Weinstein and U. Zor 751

Prostaglandin Synthesis and Metabolism in Isolated Pancreatic Islets of the Rat
K.L. Kelly and S.G. Laychock 759

Variables Associated with Radioimmunoassay of Prostaglandins in Plasma
H.G. Morris, N.A. Sherman and F.T. Shepperdson 771

Prostaglandin Hyperalgesia, IV: A Metabolic Process
S.H. Ferreira and B.B. Lorenzetti 789

The Mechanism of Action of Leukotrienes C_4 and D_4 in Guinea-Pig Isolated Perfused Lung and Parenchymal Strips of Guinea Pig, Rabbit and Rat
P.J. Piper and M.N. Samhoun 793

Interactions Between Parathyroid Hormone and Prostaglandins on Renal Cortical Cyclic AMP
M.G. Currie and D.M. Biddulph 805

Lack of Effect of Ischemia and Dipyridamole on Prostacyclin Production in Arteriosclerosis Obliterans
L. Viinikka, P. Karkola, R. Pokela and O. Ylikorkala 821

Increased Platelet Activity after Termination of Prostacyclin Infusion Into Man
A. Dembinska-Kiec, A. Zmuda, L. Grodzinska, K. Bieron, M. Basista, A. Kedzior, E. Kostka-Trabka, E. Telesz and T. Zelazny 827

Prostaglandins and Cancer: A Review of Tumor Initiation Through Tumor Metastasis
K.V. Honn, R.S. Bockman and L.J. Marnett 833

PROSTAGLANDINS
June 1981 Volume 21, Number 6

Prostaglandin Levels in Isolated Brain Microvessels and in Normal and Norepinephrine-stimulated Cat Brain Homogenates
D.L. Birkle, K.F. Wright, C.K. Ellis and E.F. Ellis 865

A Comparison of Prostacyclin and Heparin on Hemodialyses in Dogs
M. Gross, H. Bush, H. McTigue, R.J. Hamburger, W. Flamenbaum 879

Effects of Tension and Transmural Stimulation on Prostaglandin Production by Estrous Rabbit Oviductal Isthmus
K. Rajkumar, L.W. Coons, M.J.K. Harper and A. Johns 889

Central Cardiovascular Activity of Prostaglandin E_2, Prostaglandin $F_{2\alpha}$ and Prostacyclin
W.E. Hoffman, M.L. Leavitt, R.F. Albrecht and D.J. Miletich 899

Effects of Prostacyclin on Cardiovascular Reflexes from the Ventricular Epicardium of the Dog: Comparison with the Effects of Prostaglandin E_2
J. Staszewska-Barczak, G.J. Dusting, D.E. May and P.N. Nolan 905

Skeletal Muscle Vasoconstriction Produced by Prostaglandin Synthesis Inhibitors; Dependence on Pump Perfusion
F. Falotico and B.G. Zimmerman 917

Serum Luteinizing Hormone, Testosterone, Prolactin and Cortisol Concentrations After $PGF_{2\alpha}$ in the Boar
E.S. Fonda, J.R. Diehl, C.R. Barb, T.E. Kiser, R.R. Kraeling and G.B. Rampacek 933

Effect of Chronic Ipsilateral or Contralateral Intrauterine Infusion of Prostaglandin E_1 (PGE_1) on Luteal Function of Unilaterally Ovariectomized Ewes
J.M. Huie, R.R. Magness, L.P. Reynolds, G. Hoyer, T. Hueckstead, M. Colcord, B. Stalcup, G.L. Whysong and C.W. Weems 945

Effect of PGE_1 or PGE_2 on $PGF_{2\alpha}$-induced Luteolysis in Nonbred Ewes
L.P. Reynolds, J. Stigler, G.L. Hoyer, R.R. Magness, J.M. Huie, T.P. Hueckstead, G.L. Shysong, H.R. Behrman and C.W. Weems 957

Influence of Angiotensins (I,II & III) on Prostaglandin Production by Minced Rat Renal Medulla
H. Satoh, K. Matsukura, R. Yamada and S. Satoh 973

Transport-active Renal Tubular Epithelial Cells (MDCK and LLC-PK) in Culture. Prostaglandin Biosynthesis and its Regulation by Peptide Hormones and Ionophere
A. Hassid 985

Gel Filtration Separation of Bound and Free Antigens in Radioimmunoassay of Prostaglandin $F_{2\alpha}$
T.P. Deheny, W.S. Murdoch, L. Boyle, W.A.W. Walters and A.L.A. Boura. . 1003

Dissociation of Beta-Adrenergic Stimulation of Renin Secretion and Prostacyclin Synthesis in the Rabbit Kidney
R. Vandongen, A. Tunney, D. Mahoney and A. Barden 1007

Nasal Vasoconstrictor Activity of a Novel PGE_2 Analog
R.T. Jackson and J.E. Birnbaum 1015

June 1981 Volume 21, Number 6

Differences in Types of Prostaglandins Produced by Two MDCK Canine Kidney Cell Sublines
M.G. Lewis and A.A. Spector 1025

The Actions of Prostaglandins and Cyclo-oxygenase Inhibition on the Resistance Vessels Supplying the Human Fetal Placenta
T.N. Tulenko 1033

Prostanoids and Hemostasis in Chickens: Anti-aggregating Activity of Prostaglandins E_1 and E_2, but not of Prostacyclin and Prostaglandin D_2
H. Bult, E. Wechsung, A. Houvenaghel and A.G. Herman 1045